## ABSTRACT OF THE DISCLOSURE

Methods of measuring free and total chlorine content in solutions are provided without lowering the pH of the solution to the acid range by modifying a solution containing chlorine and water to contain a proton donating compound and electrochemically measuring the concentration of the chlorine in the solution. An additional potassium iodide reagent is added when total chlorine content is measured. Stable aqueous reagent solutions useful in automated chlorine analyzers which contain sodium bicarbonate, a base, and water or borax, water, and acid are also described. Finally, apparatuses for detecting the level of chlorine in water samples utilizing an automated chlorine detector, a cartridge having a solid proton donating compound, and optionally a standpipe are discussed.